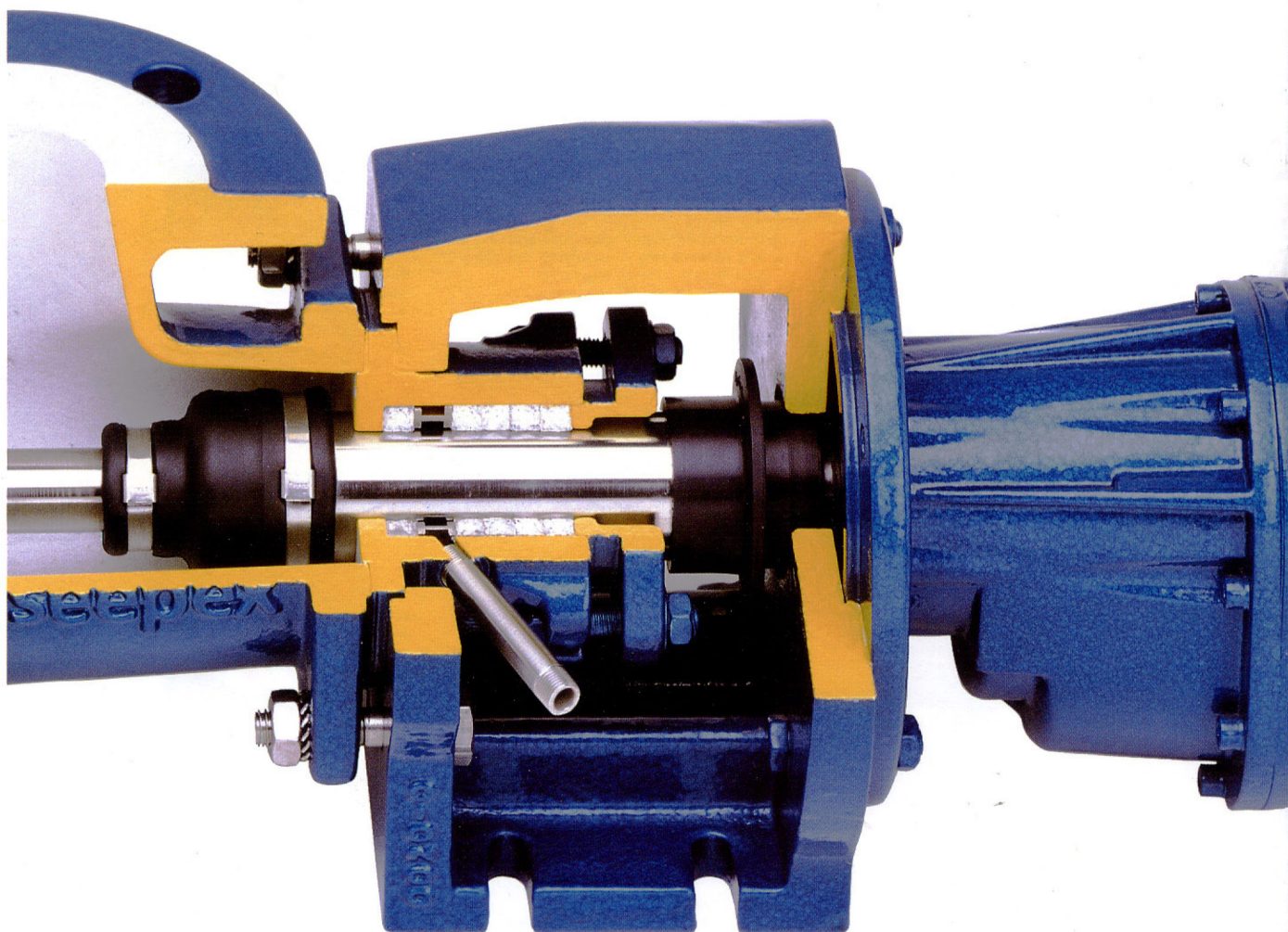


## Sealing Options

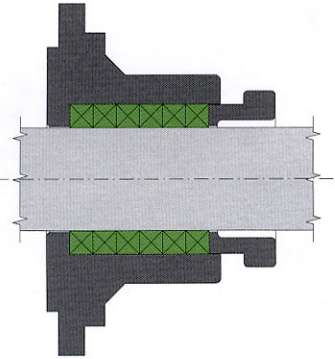
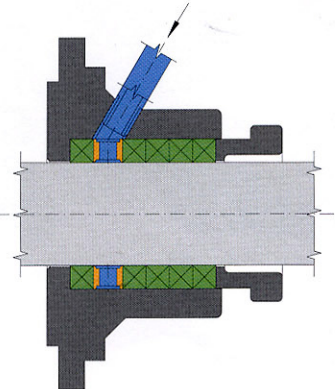


# Gland Packing

Normally, the shafts of pumps of groups **N**, **T** and **S** are sealed by gland packing. The materials and constructions are specially designed for **seepex** pumps.

## Gland Packing

- ~ universal use
- ~ inexpensive
- ~ durable
- ~ easily maintained
- ~ replacement without disassembling the pump

Design	Code	Pumped products	Pressure allowed at the shaft seal	Notes	
standard with six packing rings	<b>A</b>	without solids, clean	-0.5 up to +2 bar -7 psig to +28 psig	inexpensive standard seal	
		with solids, abrasive	-0.3 up to +0.3 bar -2 psig to +2 psig	inexpensive standard seal	
with internal lantern ring	<b>C</b>	with solids, abrasive	-0.5 up to +2 bar -7 psig to +28 psig	flushing liquid pressure to exceed the housing pressure by min. 0.5 – 1 bar, 7 – 14 psig  flushing liquid must be compatible with the pumped product	

The flushing liquid prevents product penetrating the stuffing box, ensures the lubrication between packing and shaft and reduces wear. To achieve a longer service life of the shaft in the gland packing area it is also available

with a Duktal coating, information **ADV**, page 10. If shaft seal flushing is required a lantern ring supply unit which is fitted to the pump can be supplied as an option, information **OPT**.

Design	Code	Pumped products	Pressure allowed at the shaft seal	Notes	
with internal lantern ring and labyrinth seal	V	with solids, abrasive	0 up to +2 bar 0 psig to +28 psig	same as C flushing liquid flow can be controlled and adjusted	
with external lantern ring	E	without solids, with solids	-0.85 up to +1 bar -12 psig to +14 psig	same as C reduced flushing liquid flow for vacuum operation	
with external lantern ring 2 connections	F	heat-sensitive, shear-sensitive, without solids, with solids	-0.85 up to +1 bar -12 psig to +14 psig	same as E frictional heat is carried off through second connection	
with external grease lantern ring	S	with solids, abrasive	-0.5 up to +0.5 bar -7 psig to +7 psig	used if flushing liquid supply is not available, lubrication by means of automatic grease cartridges or grease pump	



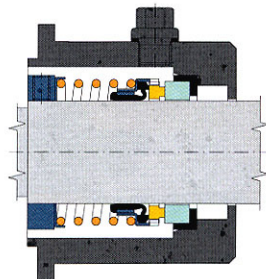
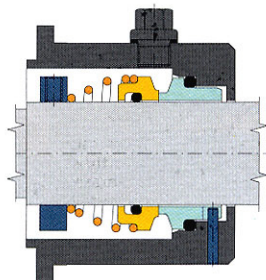
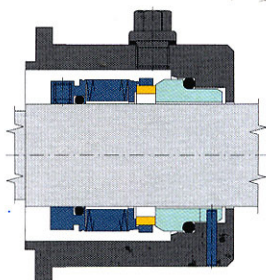
# Mechanical Seals

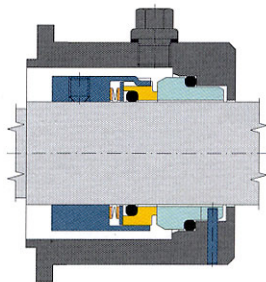
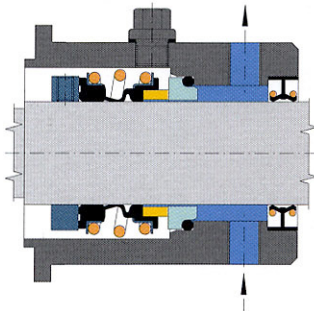
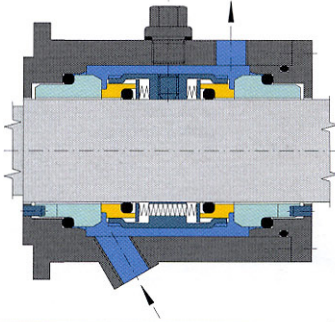
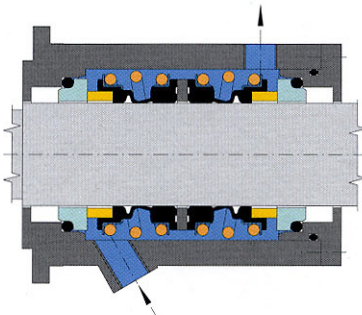
For special applications, the shaft can be sealed by mechanical seals of all major manufacturers.

Because of their design and special operating conditions, pumps of groups **D**, **E**, **K** and **C** are always equipped with single or double acting mechanical seals.

## Mechanical Seals

- ~ almost no leakage
- ~ no need for maintenance
- ~ less wear
- ~ high loading capacity by pressure and vacuum
- ~ safe, pollution-free seals for critical products

Design	Code	Pumped products	Pressure allowed at the shaft seal	Notes	
single acting, elastomer bellows, independent of direction of rotation, unbalanced	<b>GA</b>	low up to high viscosities, with solids, abrasive	-0.15 up to +12 bar -2 psig to +170 psig	domestic and industrial sewage treatment  food industry	
single acting, conical spring, dependent of direction of rotation, unbalanced	<b>GB</b>	low up to medium viscosities, no solids content up to low solids content	-0.15 up to +10 bar -2 psig to +170 psig	inexpensive standard seal  food industry	
single acting, metal bellows, independent of direction of rotation, balanced	<b>GC</b>	low up to high viscosities, high solids content, abrasive	-0.15 up to +25 bar -2 psig to +350 psig	domestic and industrial sewage treatment  dyeing and chemical industry	

Design	Code	Pumped products	Pressure allowed at the shaft seal	Notes	
single acting, wave spring/ multiple spring, independent of direction of rotation, fixed stationary seat, unbalanced	<b>GD</b>	low up to medium viscosities, no solids content up to low solids content	-0.15 up to +25 bar -2 psig to +350 psig	chemical/ pharmaceutical industry	
for GA – GD design mechanical seal with quench	<b>M</b>	adhesive, crystallizing	acc. to information GA – GD, vacuum up to -0.5 bar, -7 psig	pressureless quench with suitable liquid, lubrication in case of vacuum and vertical installation	
double acting, wave spring/ multiple spring, independent of direction of rotation, fixed stationary seat, unbalanced	<b>KD</b>	low up to high viscosities, with/without solids, abrasive, adhesive, crystallizing, aggressive, toxic	-1 up to +16 bar -14 psig to +225 psig	flushing liquid pressure must exceed pressure to be sealed off by at least 1.5 bar, 20 psig  flushing liquid must be compatible with the pumped product	
back-to-back-arrangement, elastomer bellows, independent of direction of rotation, unbalanced	<b>LA</b>	low up to high viscosities, with/without solids, abrasive, adhesive, crystallizing, aggressive, toxic	-1 up to +12 bar -14 psig to +170 psig	flushing liquid pressure must exceed pressure to be sealed off by at least 1.5 bar, 20 psig  flushing liquid must be compatible with the pumped product	

For special applications additional seals like cartridge mechanical seals, external mechanical seals and double acting mechanical seals in tandem arrangements are available.

For mechanical seals used for pumps of group C please refer to information C.

#### Flushing liquid connections of seal housings

Size	Connection
0015-24 to 17-6L	G 1/8"
17-6 to 202-6L	G 1/4"
240-12 to 350-6L	G 3/8"

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